

10553539

1

Assembly of a fluorescent lamp and an extension means

11- 10/22/07
-- This application is a National Phase Application under 35 U.S.C. 371 claiming the benefit of PCT/IB04/50471 filed on 04/20/2004, which has priority based on European Patent Office (EPO) Application No. 03101097.8 filed on 04/22/2003. --

The invention relates to an assembly of an elongate low-pressure mercury vapor discharge lamp and at least one elongate extension means.

The invention also relates to a low-pressure mercury vapor discharge lamp for use in the assembly.

5 The invention also relates to an extension means for use in the assembly.

In mercury vapor discharge lamps, mercury constitutes the primary component for the (efficient) generation of ultraviolet (UV) light. A luminescent layer comprising a luminescent material (for example, a fluorescent powder) may be present on an inner wall of the discharge vessel to convert UV to other wavelengths, for example, to UV-B and UV-A
10 for tanning purposes (sun panel lamps) or to visible radiation for general illumination purposes. Such discharge lamps are therefore also referred to as fluorescent lamps. The discharge vessel of a low-pressure mercury vapor discharge lamp is usually tubular and circular in cross-section.

In recent years much knowledge has been gained about (elongate) low-
15 pressure mercury vapor discharge lamps, for instance TLD lamps, and their properties. Low-pressure mercury vapor discharge lamps are well established in the market. In general, two varieties of low-pressure mercury vapor discharge lamps exist. A first group of low-pressure mercury vapor discharge lamps comprises "standard" colors with a luminescent layer comprised of halophosphate material with relatively low lumens and a relatively low efficacy
20 (lm/W), as well as a relatively low maintenance and a relatively low color rendering. A second group of low-pressure mercury vapor discharge lamps comprises so-called tri-phosphor lamps with a luminescent layer comprised of three or more rare-earth-containing phosphors with a relatively high lumen output, a relatively high efficacy (lm/W), a better maintenance, and an improved color rendering. Users of the first group of low-pressure
25 mercury vapor discharge lamps are often reluctant to switch to the second group of low-pressure mercury vapor discharge lamps with the tri-phosphor technology because these discharge lamps represent a substantial investment with relatively little cash payback, in that the low-pressure mercury vapor discharge lamps of the second group give more light, but no energy savings in an existing installation. For this reason sales of fluorescent lamps with tri-